

Supplementary Online Content

Moghimi S, Zangwill LM, Manalastas PIC, et al. Association between lamina cribrosa defects and progressive retinal nerve fiber layer loss in glaucoma. *JAMA Ophthalmol*. Published online February 7, 2019. doi:10.1001/jamaophthalmol.2018.6941

eTable. Factors Influencing Visual Field Likely Progression: Univariate and Multivariable Logistic Regression

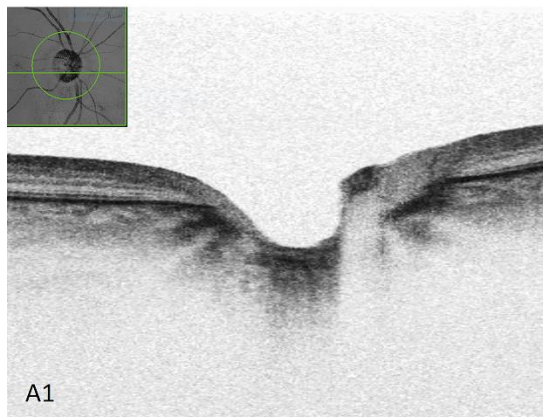
eFigure 1. Retinal Nerve Fiber Layer (RNFL) and Visual Field (VF) Changes in Subjects With Primary Open-Angle Glaucoma (POAG) With (A) and Without (B) Focal Lamina Cribrosa (LC) Defects

eFigure 2. Bar Graphs Showing the Distributions of the Rates of Visual Field Mean Deviation (MD) Change and Rates of Global Retinal Nerve Fiber Layer (RNFL) Thinning in Eyes With and Without Lamina Cribrosa Defects (LCD)

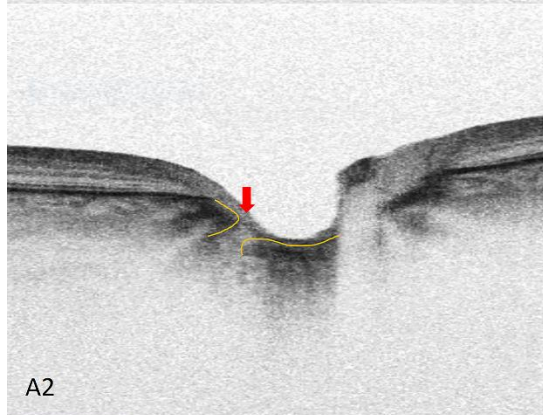
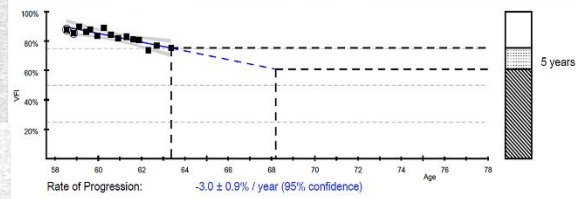
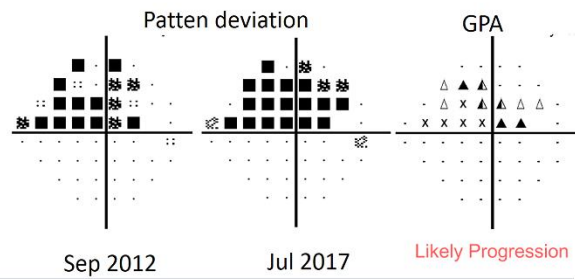
This supplementary material has been provided by the authors to give readers additional information about their work.

eTable. Factors Influencing Visual Field Likely Progression: Univariate and Multivariable Logistic Regression

Parameter	Univariate Model		Multivariable model	
	Odds Ratio (95% CI)	P value	Odds Ratio (95% CI)	P value
Age (per 10 year older)	1.33 (0.78, 2.25)	.29	-	-
Gender (Female vs. male)	0.86 (0.33, 2.23)	.77	-	-
Race (African American vs. not)	0.54 (0.14, 2.01)	.37	-	-
Disc hemorrhage during follow-up (vs. no)	3.37 (0.73, 15.4)	.12	-	-
Mean IOP during follow-up (per mm Hg higher)	0.98 (0.86, 1.11)	.77	1.07 (0.94, 1.23)	.27
CCT (per 10 μ thinner)	1.04 (0.89, 1.20)	.64	1.04 (0.88, 1.01)	.68
Axial length (per 1 mm Higher)	0.96 (0.65, 1.40)	.84	-	-
Baseline VF MD (per 1 dB lower)	1.11 (1.04, 1.17)	.003	1.11 (1.03, 1.19)	.009
LC defects (yes vs.no)	2.81 (1.17, 6.75)	.02	2.62 (1.02, 6.72)	.04
Glaucoma diagnosis (vs. suspect)	3.51 (0.98, 12.51)	.05	2.21 (0.46, 10.50)	.31
Follow-up period (per 1 year longer)	1.10 (0.55, 2.19)	.78	-	-
CI: confidence interval; CCT: central corneal thickness, IOP: intraocular pressure; LC: lamina cribrosa; MD: mean deviation; RNFL: retinal nerve fiber layer; VF: visual field				
Values with statistical significance are shown in bold.				

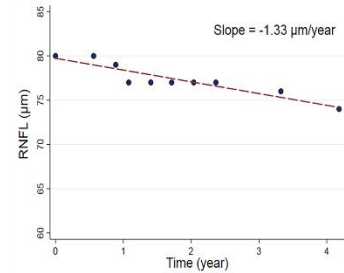
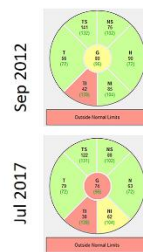


A1

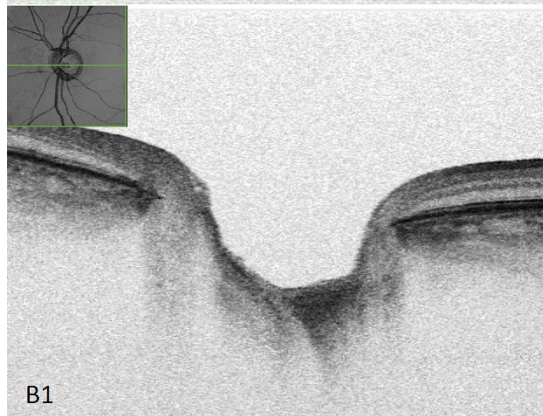
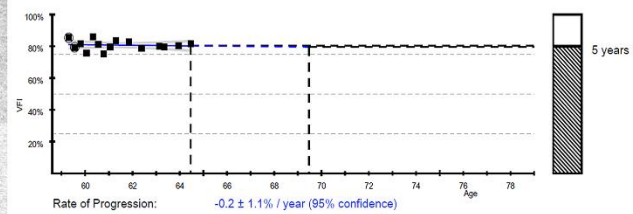
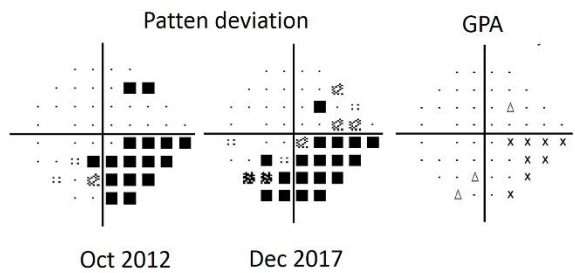


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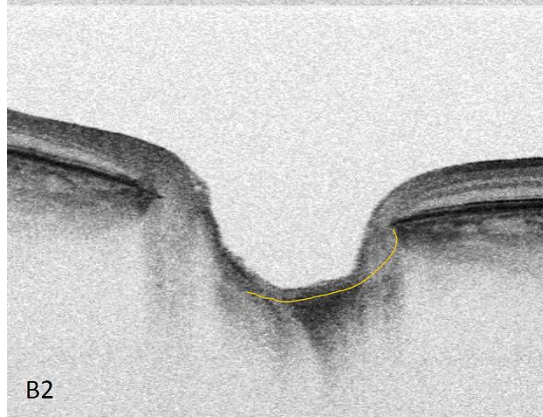
A3



A4

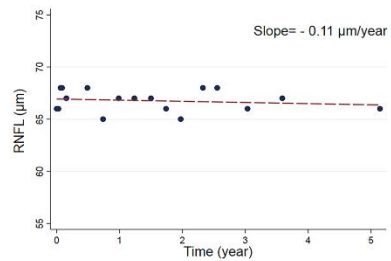


B1



B2

B3



B4

eFigure 1. Retinal Nerve Fiber Layer (RNFL) and Visual Field (VF) Changes in Subjects With Primary Open-Angle Glaucoma (POAG) With (A) and Without (B) Focal Lamina Cribrosa (LC) Defects. A1 and B1: Horizontal (right) B-scan images of the swept source (SS-OCT) from eyes with (A1) and without (B1) an LC defect. A2 and B2 images are the same as top images with orange lines delineating the anterior LC surface and large a focal LC defect was located in the inferotemporal sector (red arrows). A3 and B3: VF at the baseline and final follow up, and the result of Guided Progression Analysis (GPA) demonstrated a “likely progression” in GPA and a decrease in VF index (VFI) in the eye with a LC defect (A3), and a stable visual field in the eye without a LC defect (B3) A4 and B4: RNFL thickness maps at first and final visits and plots demonstrating the RNFL decline of the eyes with (A4) and without (B4) a LC defect over time. RNFL declined with a slope of $-1.33 \mu\text{m}/\text{year}$, and $-0.11 \mu\text{m}/\text{year}$ in eyes with or without LC defect, respectively. Note that RNFL thickness prominently decline in inferotemporal and inferonasal regions and corresponds to the location of LC defect.

eFigure 2. Bar Graphs Showing the Distributions of the Rates of Visual Field Mean Deviation (MD) Change and Rates of Global Retinal Nerve Fiber Layer (RNFL) Thinning in Eyes With and Without Lamina Cribrosa Defects (LCD)

